

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Geoffrey B. Rhoads

Application No.: 09/479,304

Filed: January 6, 2000

For: **WIRELESS METHODS AND DEVICES  
EMPLOYING STEGANOGRAPHY**

Examiner: P. Pich

Date: March 22, 2006

PATENT

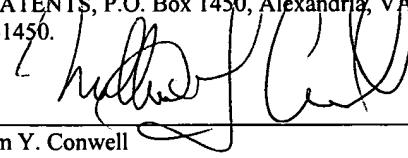
**Response Under 37 CFR § 1.116  
Expedited Procedure**

Art Unit 2135

Confirmation No. 2884

**CERTIFICATE OF MAILING**

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service on March 22, 2006 as First Class Mail in an envelope addressed to: MAIL STOP AF, COMMISSIONER FOR PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450.

  
William Y. Conwell  
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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

MAIL STOP AF  
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Sir:

Appellant requests review of the appealed-from rejection in the above-identified application. No amendment is being filed with this request.

This request is being filed with a Notice of Appeal.

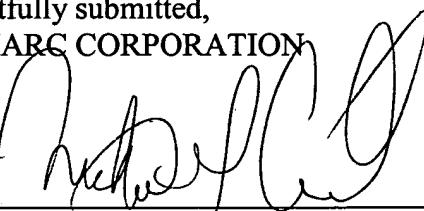
The review is requested for the reason(s) stated on the attached sheets. (No more than five attached pages are provided.)

Date: March 22, 2006

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Respectfully submitted,  
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By 

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**REASONS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Claims 1-10 stand rejected under § 103 over Ariyavistakul in view of Hembrooke. The Board will reverse these rejections. A few reasons for reversal are noted below.

Claim 1 reads:

*1. A cell phone including a data capture system and a radiant-energy digital data transmission system, characterized in that the cell phone further includes a steganographic encoder that hides a plural-bit auxiliary code within data captured by the data capture system prior to its transmission by the data transmission system.*

The primary reference, Ariyavistakul, discloses a cell phone. His invention more particularly concerns methods for bit synchronization and error detection in TDM/TDMA modulation schemes of the sort employed by the cell phone.

The secondary reference, Hembrooke, deals with deterring the unauthorized recording and rebroadcasting of musical performances (col. 1, lines 25-26). To address this problem Hembrooke selectively routes the music through a narrow notch filter in a Morse code fashion, to remove a narrow spectrum of sound from the music in a pattern that represents letters, e.g., M U Z A K (Fig. 2). This allows the copyright holder of a musical performance to determine whether a broadcast is an exact reproduction of the original performance, or a different performance.

How might an artisan confronted with Ariyavistakul modify that reference?

Perhaps there are many modifications to Ariyavistakul that an artisan would find obvious. But the claimed combination doesn't appear to be one of them.

The Office proposes modifying Ariyavistakul to incorporate teachings from Hembrooke. But what in Ariyavistakul would lead the artisan in that direction?

One rationale advanced by the Office is “the nature of the problem to be solved.”<sup>1</sup> But no problem is noted in Ariyavitsakul for which Hembrooke provides a solution. Indeed, Ariyavitsakul’s disclosure leads the artisan deep into TDMA coding theory and error correction techniques – avenues that lead nowhere near Hembrooke.

A motivation to modify and combine generally requires recognition of a particular problem, coupled with an obvious realization that the problem can be addressed by borrowing teachings from another reference.<sup>2</sup>

What problem would an artisan have recognized from Ariyavitsakul’s system?

Appellant respectfully submits, ‘none.’

“*The factual inquiry whether to combine references must be thorough and searching.*”<sup>3</sup> The need for specificity in the rejection pervades the case law.<sup>4</sup> “*Particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.*”<sup>5</sup>

It is improper, in determining whether a person of ordinary skill would have been led to a combination of references, simply to “[use] that which the inventor taught against its teacher.”<sup>6</sup> Yet, despite assertions to the contrary, that is the foundation on which the present rejection seems based.

Certainly, as argued by the Office cell phone fraud is a widely recognized problem. However, as also noted by the Office, many previous patents offer solutions to this problem (e.g., citing the numerous documents submitted in applicant’s September 16, 2005 IDS<sup>7</sup>). An artisan facing such a concern would turn to one of these numerous documents, which squarely address this problem, rather than stretch so far as to look to Hembrooke’s Morse code identification technique for Muzak tunes.

<sup>1</sup> February 3, 2006, Action, page 4, lines 17-18.

<sup>2</sup> Recognition of a problem, alone, is not enough. Case law establishes that an invention may be patentable even if the solution is obvious once the source of the problem is identified. In re Zurko, 111 F.3d 887 (Fed. Cir. 1997); In re Sponnoble, 405 F.2d 578 (CCPA 1969).

<sup>3</sup> McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001).

<sup>4</sup> In re Sang Su Lee, 277 F.3d 1338 (Fed. Cir. 2002).

<sup>5</sup> In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000).

<sup>6</sup> In re Sang Su Lee, *ibid*, citing W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

<sup>7</sup> February 3, 2006, Action, page 5, lines 9-10.

The Board will not sustain a rejection premised – in essence – on the argument that once a problem is recognized, then *all* solutions to the problem are obvious. Yet, in essence, that is where “the nature of the problem to be solved” rationale leads. The Office argues:

*The incorporation of Hembrooke’s teachings within Ariyavitsakul’s cell phone system allows for the identification of a signal’s (i.e., cell phone signal’s) origin, thus is a motivation that applicant admits was within knowledge of one of ordinary skill.*

This is not what § 103 requires. This logic starts from *Appellant’s invention*, and works *backward*. The required inquiry, in contrast, is what would an artisan - *starting from the prior art* - do? The Office failed to present such an analysis.

The captioned rationale is simply hindsight in a different guise, and will not be sustained.

Alternatively, the Office justifies the proposed modification of Ariyavitsakul by Hembrooke because “*Ari and Hembrooke’s teachings both belong to the field of signal processing.*”<sup>8</sup>

The Board, of course, will recognize that this proves too much. The field of signal processing is immense. If every invention comprised of elements drawn from this field is obvious, then very little would meet the requirements of § 103. The law is not so severe.

The Office failed to present the convincing line of reasoning required to sustain a § 103 rejection. Having failed to meet its burden, the rejection will be reversed.

Claim 3 introduces the limitation “*wherein substantially all of the data transmitted by the cell phone is steganographically encoded.*” (Emphasis added.)

This limitation is not addressed by the Final Rejection. Accordingly, *prima facie* obviousness has not been established.

Moreover, this limitation is not found in either of the cited reference. Thus, even if the art were combined as proposed, it could not yield the arrangement of claim 3.

<sup>8</sup> December 2, 2005, Action, page 6, lines 20-21.

Again, the Board will reverse.

Claim 7 similarly introduces a limitation not taught by the art, “*wherein the steganographic encoder additively combines an overlay signal with the data captured by the data capture system.*” (Emphasis added.)

Hembrooke does not additively combine an overlay signal. Instead, Hembrooke operates by *notching* out a narrow band of signal frequencies.

In one passage, the Final Rejection argues Hembrooke’s arrangement “*reads on*” the limitation found in claim 7.<sup>9</sup> The Board will recognize that this is a factual mis-statement.

In another passage, the Final Rejection argues that the claimed method “*is obvious to Ari and Hembrooke’s combination invention.*”<sup>10</sup> However, the Action simply offers the bare assertion of obviousness; no rationale in support thereof is offered. This falls short of the burden imposed by § 103.

Again, the Office failed to meet the burden imposed by § 103. Again, even if Ariyavitsakul and Hembrooke were combined as proposed, they cannot yield the arrangement of claim 7.

Likewise, the art – even if combined – cannot yield the combination of claim 8.

Claim 8 requires that “*said overlay signal is dependent both on said plural-bit auxiliary code and on said data captured by the data capture system.*” Even if Hembrooke’s Morse code is regarded as the “overlay signal,” his code is independent of the underlying musical performance. In the claimed arrangement, in contrast, the overlay signal is a function *both* of the code to be conveyed, *and also* the host data (e.g., voice data) being encoded.

As to this claim, too, the Office has not established *prima facie* obviousness. Again, the Board will reverse.

For brevity’s sake, the foregoing discussion has reviewed just certain of the claims pending in the application, and only selected points have been reviewed in connection with each. Many other points that might have been raised concerning the claims, the art, and the rejections, have not been belabored.

Nonetheless, the foregoing brief observations are believed sufficient to establish that the outstanding rejections would not be sustained by the Board.

<sup>9</sup> December 2, 2005, Action, page 9, 2d line from the bottom.

<sup>10</sup> December 2, 2005, Action, page 9, 5<sup>th</sup> and 6<sup>th</sup> lines from the bottom.